

they sat up, very erect, their white underparts toward me, and remained quite motionless for several seconds. Apparently satisfied with conditions, they turned and disappeared into the bushes, only to appear again in a moment with one—two—three others; whereupon all five in single file, set out on their deliberate return to the bank where the two had first appeared. To see such wild creatures in such numbers, and at such leisure, was a new experience for me, and a very delightful climax to my afternoon on the brook.

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## ON THE WORK OF THE LATE DANIEL W. COQUILLET AND OTHERS.

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Mr. C. H. T. Townsend has made a recent publication<sup>1</sup> the occasion for some critical remarks concerning the work of contemporary workers in the Muscoidean flies. The greater part of this comment is distinctly favorable in character. In fact, an odor of flattery is quite perceptible throughout most of the paper. This complimentary attitude is suddenly discarded at the conclusion of his remarks with the following statement: "Practically all of the work reviewed above is *constructive*, and as such it is to be emulated. . . . Contrasted with this work is that performed by the late Mr. Coquillett, which was *destructive* in that it attempted to sink into the synonymy valid generic and specific names. Such work is a pulling down which leaves us worse off than before."

Thus according to Mr. Townsend our work is constructive, but strange to say, he fails to perceive the fact that it is based almost wholly upon that of the late Mr. Coquillett, which is denounced as "destructive." Behold a paradox. The permanent based upon the ephemeral, which is absurd, as brother Euclid is fond of remarking.

Now what are the facts concerning this cataclysmic work of the late Daniel W. Coquillett as viewed by an earnest, if humble, student of the same?

<sup>1</sup> JOUR. N. Y. ENT. SOC., Vol. 21, p. 301.

It may safely be stated as a postulate that, if a synoptic writing succeed in conveying to its students the means of arriving at its author's concept of the entities included therein, it must of necessity be considered as having attained the end for which it was created. Mr. Coquillett's work has passed this test. It is certainly true that many of his descriptions are much too brief. Also his palette is set with but two colors; namely, black and yellow. Of these, his black is often not black, and his yellow may be any tint ranging from true yellow to reddish brown. Nevertheless, enough structural or other characters are usually included to enable the student to follow his meaning in most cases. In other words, the entities included are recognizable as the author saw them. That he was sometimes wrong in his point of view does not alter the intrinsic value of the synopsis materially.

Again, if such a work afford other investigators a practicable basis for future discussion, it must be considered as possessing value. It may be stated with perfect truth, that every worker mentioned in Mr. Townsend's recent article has used the Revision of the North American Tachinidae as a basis for his investigations. This in my estimation is the significant point to be kept in mind while judging Mr. Coquillett's work. Brauer and Bergenstamm's publication, excepting always its superb illustrations, has suffered because it is incomprehensible to most investigators.

Mr. Townsend has complained many times in print of the injustice done him by the synonymy as compiled by Coquillett. But, sad to relate, without its voluminous synonymy, this really monumental work would be as difficult of comprehension as most of that which it has supplanted. In this synopsis Mr. Coquillett undoubtedly sank some names, both generic and specific, which either have been or will be revived. His manuscript notes show that he himself recognized this fact. But Mr. Townsend's statement to the effect that "Whenever it was possible so to manipulate type designations as to sink genera, he has not neglected the opportunity," I regard as unjust in its insinuations. I much prefer to believe that Mr. Coquillett acted from conviction alone in these matters.

Any person who has the opportunity of comparing Mr. Townsend's type specimens with his published descriptions can readily understand why at least some of his creations have been relegated

into "innocuous desuetude." Thus, the type specimen of his *Myio-  
phasia* (*Locavia*, *Enyomma*) *globosa* possesses a single weak, median  
marginal bristle on the right side of the second abdominal segment.  
This becomes a "marginal pair" of macrochætæ in the original de-  
scription. A most scrupulous examination of the type shows beyond  
dispute that the opposite bristle never existed except in the imagina-  
tion of the describer. Francis Walker and Robineau Desvoidy both  
possessed this gift of ultra-microscopic vision.

Mr. Townsend professes admiration for the work of Mr. Robineau  
Desvoidy, but remarks<sup>1</sup> that the writings of Mr. Coquillett "will all  
have to be revised." So will mine and yours, dear reader. Let us  
hope that posterity will deal more tenderly with it than has been the  
fate of Robineau Desvoidy.

On the other hand, Mr. Townsend has failed to see structures  
which are not only visible but even prominent, providing the specimen  
be carefully examined. For instance, in his genus<sup>2</sup> *Oestrogaster*  
(Catalog number 15148, U. S. N. Mus.) he says, "No palpi," etc.  
The type specimen bears a perfectly good pair of well developed  
palpi, situated in the usual place on the proboscis. Or again he ap-  
parently becomes suddenly color blind as in the case of *Dejcania*  
*andina*<sup>3</sup> "Close to *braziliensis* Desv. and *armata* Wied. differs in  
having no yellow whatever on the legs." Almost immediately below  
this we read, "Legs wholly yellow!" The type specimen of this  
species is now in the possession of three pairs of very yellow legs  
indeed. Evidently, this large and varied assortment of synonymy  
in Mr. Coquillett's work has some basis in fact.

It would seem that the possession of "that keen judgment of  
character values and natural appreciation of phylogenetic relations,"  
cannot preserve even a "master zoologist" from palpable error when  
he does take sufficient care to see what is visible.

In the year 1891, Mr. Townsend began descriptive work in the  
Muscoidean flies.<sup>4</sup> It might be of interest to inquire as to what dis-  
position has been made of the several species proposed in this first

<sup>1</sup> *Insecutor* Insc. Mens., Vol. 1, p. 115, 1913.

<sup>2</sup> Descriptions of New Genera and Species of Muscoidean flies from the  
Andean and Pacific Coast Regions of South America, Proc. U. S. Natl. Mus.,  
Vol. 43, p. 309.

<sup>3</sup> Loc. cit., Natl. Mus., Vol. 43, p. 333.

<sup>4</sup> Proc. Ent. Soc., Washington, Vol. 2, p. 134.

paper. The first four species proposed are placed in *Hyalomyia*; they are called *punctigera*, *aldrichii*, *robertsonii* and *purpurescens*, respectively. These are each and all sunk under *Phorantha occidentalis* Walker, by Mr. Coquillett. There exists scarcely a shadow of a doubt that they belong there. The next species proposed is *Trichopoda aurantiaca*. This appellation has since given place to *cilipes* Wied. Then follows one called *Cistogaster pallasii*. This description was unrecognizable to Mr. Coquillett, but Dr. J. M. Aldrich says<sup>1</sup> "The type looks to me like a melanic variety of *immaculata*." The next species proposed is *Ocyptera argentea*; it survives as such. The next and last species described is called *Wahlbergia atripennis* which name now rests in peace under the inscription *Xanthomelana atripennis* Say.

Thus it is seen that of seven proposed species but one has escaped extinction or the stain of grave suspicion.

The late Dr. John B. Smith once stated his belief in the theory that a man's earlier work is usually an index to what may be expected of his more mature state of development. Let us see whether or not this theory applies in the case under scrutiny. Seventeen years have passed, as the story books say. Mr. Townsend can no longer be considered in his callow youth as a dipterologist. He has published rather plentifully meantime. Among the most important of these writings is one called the *Taxonomy of the Muscoidean Flies*.<sup>2</sup> Throughout almost this entire work he lays himself open to criticism by incautious proposals and generalizations. The student will find on page 118, the proposal of ten new species of *Lucilia* all based on the most trivial of chaetactic characters. These have recently retired<sup>3</sup> to a well-merited oblivion under the work of an able young investigator, Mr. J. D. Tothill. Seventeen years of experience have evidently made little change in the methods of the irrepressible Mr. Townsend.

In 1908, it became apparent, chiefly through the work of the Gypsy Moth Laboratory staff, including Mr. Townsend, that some taxonomic possibilities resided in the reproductive organs and methods of reproduction in the Muscoidean flies. He at once turned his atten-

<sup>1</sup> List of North American Diptera, p. 422.

<sup>2</sup> Smithsonian Inst. 1908.

<sup>3</sup> Annals Ent. Soc. America, Vol. 6, p. 241.

tion to this line of investigation with his usual exuberance and lack of restraint. This has led him into some of the most egregious errors of his long career. Undoubtedly the most daring of these is the attempted erection of some nine genera comprising eleven species based, as he says, "on the reproductive, egg and first maggot structures." But, it should be explained, at the time these descriptions are published, it is admitted there are before him nothing whatever but the viscera of the specimens involved in the discussion. Furthermore, the location of the remainder of the carcasses is unknown to him! They may be, according to his statement, "at the Gypsy Moth Laboratory," or in "the National Museum collection" or . . . they may not be in existence for all that Mr. Townsend knows, because he has been located thousands of miles distant from these places for years. But worst of all, no description whatever of the external character of these flies is afforded us. Even Francis Walker was never guilty of an offence against entomological science equal to this. Of course the designations included in this category cannot stand as valid names, because they are based on fragments of the insides (to use a colloquialism) of insects, the external appearance of which is unknown to science.

It would be easy to cover many pages in criticism of Mr. Townsend's recent work on the Muscoidean flies. Enough has been said however to warn the student not to regard it too seriously. It is to be hoped that the disorderly array of information and misinformation which he has been guilty of publishing will not prevent young workers from entering the field of tachinology. If we keep in mind the fact that our work in systematic entomology will surely be successful in precisely that degree to which it proves practicable, we shall not go far astray.

It may contain the quintessence of wisdom and constitute a paragon of ingenuity, but if these qualities are not made comprehensible to our fellow workers, we may feel assured that our work will suffer accordingly.

The systematist who cannot see things as they are, or tell the unvarnished truth regarding what he sees, would better not have been born in so far as the interests of science are concerned. Some things have been said in this discussion which may seem harsh to the person most concerned. If so, I ask his pardon for having said them.

No personal slight whatever is intended thereby, and not a trace of malice or resentment on the part of the writer colors any statement made herein. But I conceive that these criticisms would much better be said now, while the subject of them is present to explain this position, than in some distant future, when time shall have sealed his lips and stayed his busy pen forever. His fine command of English and evident scholarship will then avail him nothing, if some surviving, or perhaps yet unborn student rise up and brand his work *destructive*.

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### NEW HEMIPTERA-HETEROPTERA, WITH COMMENTS UPON THE DISTRIBUTION OF CERTAIN KNOWN SPECIES.

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***Chlorocoris flaviviridis* new species.**

Color yellowish-green, subshining, coarsely punctate. In shape long ovate; measuring to the tip of the membrane about twice as long as the breadth of the pronotum. Head as long as the width across the eyes, the lateral lobes rounded at their apices, a trifle longer than the tylus but not contiguous before it, the surface of lateral lobes basally, base of tylus and vertex of head transversely wrinkled, in front of each ocellus, next the eyes, is a decolorous smooth patch; lateral margins of head lightly raised, smooth, pale and slightly concave a short distance before the eyes. Antennae yellowish, sometimes tinted with rosaceous basally, with the apical joints slightly embrowned; the first joint passing the apex of head, second, third and fourth joints subequal, fifth one third shorter; beneath paler, almost impunctate but transversely wrinkled. Rostrum reaching the middle of the third ventral segment, pale with apex infuscated. Pronotum concolorous, lateral margins straight, anteriorly finely serrate, narrowly yellowish, becoming ruby-red posteriorly, the humeri bright red, prominently acute but not spinose; the general paler surface is provided with coarse dark green punctures, appearing somewhat rugulose posteriorly; through the middle is a faint longitudinal ridge, evanescent through the rugulose portion; just within the lateral margins is a series of scattered black punctures which are sharply defined. Scutellum concolorous, coarsely punctate and rugulose on a pale background, throughout its length a pale median stripe becoming callosed posterior to the middle and sometimes tinted with red, apex narrow, callosed. Corium rather coarsely punctate, the punctures becoming finer and more closely set towards the apex, the costal margin in its basal half